

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

521 Outbreak of Type E Botulism — New Jersey, 1992
522 Public-Sector Vaccination Efforts — United States, 1989–1991
528 Coronary Heart Disease Incidence, By Sex — United States, 1971–1987
529 Estimated National Spending on Prevention — United States, 1988
539 Notice to Readers
539 Quarterly AIDS Map

Epidemiologic Notes and Reports**Outbreak of Type E Botulism
Associated with an Uneviscerated, Salt-Cured Fish Product —
New Jersey, 1992**

In May 1992, the New Jersey Department of Health (NJDH) received a report of a man admitted to a hospital with a preliminary diagnosis of botulism. Subsequently, three family members of the man were diagnosed with botulism. This report summarizes the epidemiologic investigation of these cases that linked illness to consumption of an uneviscerated, salt-cured fish product.

During May 4–5, a man of Egyptian descent aged 32 years made three visits to a hospital emergency department because of rapidly progressive problems including dizziness, ptosis, facial drooping, dry mouth, weakness, and respiratory failure requiring mechanical ventilation. On the third visit, myasthenia gravis was diagnosed on the basis of a positive Tensilon* test. On May 6, the patient was transferred to another hospital for treatment of suspected myasthenia gravis; on arrival, he was admitted to intensive care and continued on mechanical ventilation for respiratory failure. Plasmapheresis was performed without improvement in symptoms.

Also on May 6, three family members developed blurred vision, ptosis, and dry mouth. A diagnosis of botulism was considered, and the three family members were hospitalized. All four patients received trivalent (types A, B, and E) botulinic antitoxin.

NJDH traced the source of botulism to an ethnic preparation of fish known as moloha, an uneviscerated, salt-cured fish product. On May 3, the family consumed moloha reported to have been purchased that day from a local retail fish market. They consumed the moloha without cooking or heating it. Botulinic toxin type E was detected in leftover fish and in a stool specimen from the index patient. A family friend who also ate some of the fish but did not develop symptoms was treated with antitoxin as a prophylactic measure.

*Use of trade names is for identification only and does not imply endorsement by the Public Health Service or the U.S. Department of Health and Human Services.

Type E Botulism — Continued

On May 6, no moloha or similar fish products were found at the market, and the owner denied selling this type of fish. The fish distributors serving this market were contacted, but no source of the fish could be identified.

On May 7, NJDH notified all New Jersey acute-care hospitals, public health departments in the New Jersey and New York City areas, and the New Jersey Poison Information and Education System of the outbreak and signs and symptoms of botulism. On May 8, the public was alerted through the news media to avoid consumption of moloha and to seek medical care if symptoms of botulism developed. CDC notified state epidemiologists of nearby states of the outbreak. No additional cases were identified.

Reported by: G French, MD, A Pavlick, DO, A Felsen, MD, P Gross, MD, Hackensack Medical Center, Hackensack; J Brook, MD, S Paul, MD, C Genese, MBA, K Kolano, G Wolf, KC Spitalny, MD, State Epidemiologist, New Jersey Dept of Health. Div of Emergency and Epidemiological Operations and Newark District Office, Office of Regional Operations, Food and Drug Administration. Enteric Diseases Br, Div of Bacterial and Mycotic Diseases, National Center for Infectious Diseases, CDC.

Editorial Note: Foodborne botulism is a paralytic illness caused by ingestion of a preformed neurotoxin in contaminated food. Patients typically develop cranial nerve palsies followed by descending paralysis that can lead to respiratory failure and death. Of the seven toxin types, three (A, B, and E) account for virtually all cases of botulism in humans. Type E is associated with preserved or fermented fish and marine mammals, and ethnic preparations of uneviscerated fish pickled in brine have previously been associated with type E botulism (1-3).

Treatment for botulism usually requires intensive care, including mechanical ventilation; the early administration of antitoxin is recommended. Physicians who suspect botulism should contact their state health departments immediately for assistance with diagnosis and treatment. State health departments can contact CDC to obtain antitoxin and further assistance.

References

1. Shaffer N, Wainwright RB, Middaugh JP, Tauxe RV. Botulism among Alaska Natives: the role of changing food preparation and consumption practices. *West J Med* 1990;153:390-3.
2. Slater PE, Addiss DG, Cohen A, et al. Foodborne botulism: an international outbreak. *Int J Epidemiol* 1989;18:693-6.
3. Telzak EE, Bell EP, Kautter DA, et al. An international outbreak of type E botulism due to uneviscerated fish. *J Infect Dis* 1990;161:340-2.

Current Trends**Public-Sector Vaccination Efforts
in Response to the Resurgence of Measles
Among Preschool-Aged Children — United States, 1989-1991**

From 1989 through 1991, in the United States, the incidence of reported measles increased sixfold to ninefold over the median annual incidence (1.3 per 100,000 population) reported from 1981 through 1988. In 1990, the peak of the resurgence, the incidence of measles among children aged <5 years was 15-fold higher than the median 1981-1988 incidence (4.8 per 100,000) (1). During 1991, approximately 9500 cases were reported (Figure 1), including 4662 cases among children aged <5 years (CDC, unpublished data). The measles epidemic is a consequence primarily of the

Measles — Continued

failure to vaccinate preschool-aged children at appropriate ages (2); among children aged 16–59 months who developed measles during this resurgence, only 15% had received measles vaccine as recommended (CDC, unpublished data). This report compares the number of public clinic vaccinations* (i.e., all measles-containing vaccines [MCV][†], diphtheria-tetanus-pertussis vaccine [DTP][‡], and oral polio vaccine [OPV]) for 1988 with that for 1989–1991 in response to the measles resurgence.

During 1989–1991, state health departments reported a provisional total of 55,467 measles cases that resulted in a minimum of 11,251 known hospitalizations, 44,127 hospital days, and 166 suspected measles-related deaths. The resurgence of measles prompted collaborative efforts among federal, state, and local government agencies and private physicians and other private-sector groups to improve overall vaccination coverage among preschool-aged children. Records of vaccine doses (MCV, DTP, and OPV) administered to preschool-aged children in public clinics are reported to CDC by age group by the 63 immunization projects in the United States and its territories for all publicly purchased vaccines. For this report, assessment of the response to the resurgence of measles was limited to vaccinations administered through the public sector (i.e., federally, state-, and locally funded clinics).

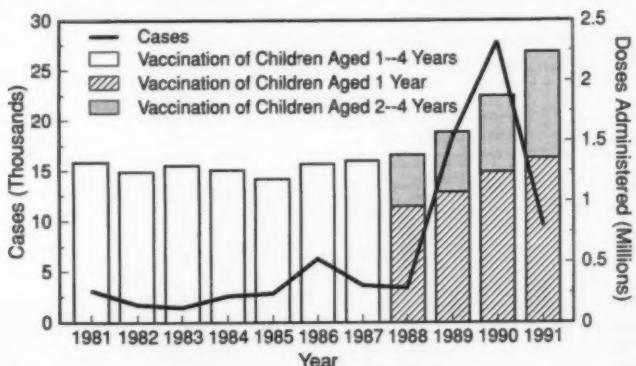
Doses of MCV, DTP, and OPV provided in public clinics in 1988 were compared with doses provided annually from 1989 through 1991 (Tables 1 and 2). Among children aged 12–23 months,[§] the number of doses of MCV administered each year

*National data on vaccination coverage are not available to assess the overall impact of recent private- and public-sector vaccination efforts. However, response of the public sector (federally, state-, and locally funded clinics) could be evaluated because records of vaccine doses administered in public clinics to preschool-aged children are reported to CDC.

[†]Data includes doses administered of measles-mumps-rubella, measles-rubella, and measles vaccines.

[‡]Measles vaccine is usually recommended for children aged 12–15 months depending on local policy (3).

FIGURE 1. Reported measles cases* and measles-containing vaccine administered in the public sector to children aged 1–4 years[†] — United States, 1981–1991



*1991 provisional data.

[†]Data on doses administered to children aged 1 year available since 1988.

Measles - Continued

increased substantially after 1988. In 1991, the number of doses administered to children aged 1 year was 42% higher than in 1988. The estimated proportion of all children aged 12-23 months who received MCV through public clinics also increased, from 25% during 1988 to 33% during 1991. During 1989-1991, doses of MCV administered in public clinics increased (mean: 59%) in the 10 immunization projects with the largest measles outbreaks during these years; however, vaccination also increased (mean: 38%) in immunization project sites that did not have large measles outbreaks. In addition to increases in MCV vaccination, doses of DTP and OPV administered to children aged <12 months increased (DTP increased 26% and OPV, 22%). Overall, during 1989-1991, doses of MCV, DTP, and OPV administered to all preschool-aged children increased at a similar level.

Reported by: Div of Immunization, National Center for Prevention Svcs, CDC.

Editorial Note: The findings in this report indicate that since 1988, a steadily increasing number of doses of MCV, DTP and OPV have been administered to children at the appropriate age through public-sector vaccination programs. Moreover, these increases also occurred in areas other than those in which measles outbreaks occurred during 1989-1991.

TABLE 1. Doses of measles-containing vaccine (MCV) administered in public clinics to children aged 12-23 months, by year - United States, 1988-1991

Year	Doses administered	% Change compared with 1988	% Vaccinated*
1988	953,535	—	25
1989	1,070,240	12	27
1990	1,239,259	30	31
1991	1,358,117	42	33

*Estimated population of children aged 12-23 months divided by the number of doses of MCV administered in public clinics to children aged 12-23 months.

TABLE 2. Doses of diphtheria and tetanus toxoids and pertussis vaccine (DTP) and doses of oral polio vaccine (OPV) administered in public clinics to children aged <12 months, by year - United States, 1988-1991

Vaccine/Year	Doses administered	% Change compared with 1988	% Vaccinated with dose 1*
DTP			
1988	3,000,248	—	30
1989	3,241,429	8	30
1990	3,410,507	14	30
1991	3,788,208	26	35
OPV			
1988	2,359,966	—	29
1989	2,465,770	4	29
1990	2,603,725	10	30
1991	2,603,725	22	34

*Estimated annual birth cohort divided by the number of children aged <12 months receiving a first dose of DTP or OPV in public clinics.

Measles — Continued

Although the incidence of measles began to decrease during 1991, intense publicity efforts about the need for preschool vaccination continued, and the greatest number of doses of all three vaccines were administered that year (Figure 1). The reasons for the improved vaccination performance of the public sector reflect, in part, collaborative public- and private-sector efforts to 1) educate and motivate parents to ensure their children are vaccinated at recommended ages and 2) assure that providers both reduce barriers to vaccination and take advantage of all opportunities to vaccinate.

Some of the increase in vaccinations since the resurgence of measles also might reflect a shift in vaccine delivery from the private to public sector. A recent survey of physicians in Dallas suggested they were referring substantially more patients to public clinics where vaccines were available free or at nominal charge because these patients could not afford vaccination in the private sector (4). In particular, from 1982 through 1992, the price of vaccines to fully vaccinate a child increased approximately 10-fold in the private sector—in part, because the Advisory Committee on Immunization Practices and the Committee on Infectious Diseases of the American Academy of Pediatrics now recommend 17–18 doses of different vaccines, compared with 10 doses in 1982 (5). Much of this increased cost must be borne by the parent since, as of 1990, only half of the traditional employer-based indemnity plans provided reimbursement for childhood vaccination (6).

During 1991, although approximately 400,000 more children were vaccinated against measles at the appropriate age than in 1988, only 33% of these 1-year-olds may have been vaccinated against measles at the recommended age in public clinics—a percentage substantially lower than the estimated 50% of children traditionally served by the public sector. Major sustainable improvements in vaccination programs are still needed to meet the national health objective for the year 2000 to completely vaccinate 90% of children by their second birthday (objective 20.11) (7).

During the next several years, as children vaccinated during 1989–1991 enter school, vaccination records will become available for public health agencies to assess whether the increases in vaccine administered in the public sector were associated with overall increases in vaccination levels of preschool-aged children.

References

1. Gindler JS, Atkinson WL, Markowitz LE, Hutchin SS. The epidemiology of measles in the United States in 1989 and 1991. *Pediatr Infect Dis J* (in press).
2. National Vaccine Advisory Committee. The measles epidemic: the problems, barriers and recommendations. *JAMA* 1991;266:1547–52.
3. CDC. Measles prevention: recommendations of the Immunization Practices Advisory Committee (ACIP). *MMWR* 1989;38(no. S-9):7.
4. Schulte JM, Brown GR, Zetzman MR, et al. Changing immunization referral patterns among pediatricians and family practice physicians, Dallas County, Texas, 1988. *Pediatrics* 1991;87:204–7.
5. Orenstein WA. Future directions. In: Proceedings of the 26th Immunization Conference. St. Louis: June 1–6, 1992 (in press).
6. Sullivan CB. Health insurance picture in 1990. Washington, DC: Health Insurance Association of America, 1991; HIAA publication no. 1990ORB.
7. Public Health Service. Healthy people 2000: national health promotion and disease prevention objectives. Washington, DC: US Department of Health and Human Services, Public Health Service, 1991:122–3; DHHS publication no. (PHS)91-50213.

Coronary Heart Disease Incidence, by Sex — United States, 1971–1987

Coronary heart disease (CHD) is the leading cause of death in the United States for both men and women, although the rates are lower among women (1). The incidence of CHD, however, has not been as well characterized among women as it has among men (2). This report presents data on sex-specific incidence of CHD and the risks associated with smoking, diabetes, hypertension, total cholesterol, body mass, and age using data from the Epidemiologic Follow-up Study of the First National Health and Nutrition Examination Survey (NHEFS) (3).

The NHEFS is the first prospective cohort study of a representative sample ($n=14,407$) of the noninstitutionalized U.S. adult population. During 1971 through 1975, members of the First National Health and Nutrition Examination Survey (NHANES I) cohort completed an extensive interview regarding demographic characteristics and medical history and received a standardized physical examination. During 1982–84, 1986, and 1987, the NHEFS attempted to trace and re-interview NHANES I participants aged ≥ 25 years during the baseline exam. Death certificates and records of hospitalizations also were obtained. As of 1987, more than 96% of the initial study participants either had been recontacted at least once or had died.

This analysis was limited to persons without CHD at baseline as ascertained through self-report and physical examination. Because of the small number of persons of other races in the sample, results are presented for the 12,402 white participants. Information obtained during the baseline physical examination and in-person interview as well as subsequent interviews was used to characterize each person's exposure to various CHD risk factors at baseline. Hospitalizations in which a diagnosis of CHD (*International Classification of Diseases, Ninth Revision, Clinical Modification*, codes 410–414) was listed on the discharge summary provided the measure for CHD morbidity. CHD mortality was defined as deaths for which CHD was listed as the underlying cause of death on the death certificate. The first diagnosis of CHD, either at hospitalization or death, was used as the measure of CHD incidence.

Incidence rates were calculated as incidence densities; each person could contribute person-years of follow-up to more than one age category (e.g., a 42-year-old person who was followed for 11 years contributed 3 years to the 25–44-year age group and 8 years to the 45–54-year age group). The mean length of follow-up for CHD incidence was 12.4 years. Sex-specific Cox proportional hazards models that included all the risk factors being analyzed were used to obtain relative risks (RRs), controlling for all the other variables. These adjusted RRs were then used to obtain the population-attributable risk percentage (PAR%) (i.e., the proportion of risk in the study population attributable to each factor, controlling for all others).

The age-adjusted CHD incidence rate for men was 110 per 10,000 person-years; for women, the rate was 64 per 10,000 person-years. Within each age group, men had a higher rate of CHD incidence (Figure 1). While the rate generally increased by the same amount with age for men aged 25–74 years, the rate of increase of CHD incidence among women accelerated after age 65 years. Thus, the RR for CHD for women increased from 0.3 for the youngest two age groups (25–44 years and 45–54 years) to 0.8 for the oldest (≥ 75 years).

Men were more likely than women to be first diagnosed with an acute form of CHD. Death was the incident CHD event among 18.6% of men, compared with 12.5% of

Coronary Heart Disease — Continued

women. Myocardial infarction was diagnosed in 41.3% of incident CHD events among men and 29.7% of incident events among women. Although women were more often first diagnosed with chronic CHD, specific CHD diagnoses could not be reliably analyzed individually.

Most of the risk factors studied appeared to have similar effects on CHD incidence in men and women when assessed in sex-specific models (Table 1). Cholesterol is the only risk factor for which the effect was greater among men. Furthermore, when data for both sexes were combined and interactions between sex and all risk factors were included, only age and cholesterol had significantly different effects on incidence among women than among men ($p < 0.05$).

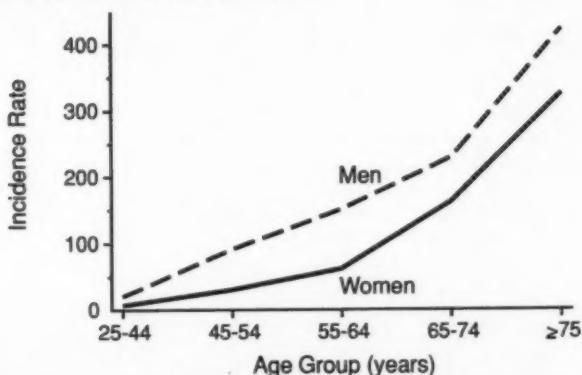
When sex-specific models were stratified by age (25–64 years and 65–75 years), the associations between most risk factors were weaker among the older participants in both sexes. The only exception was the relation between education and CHD incidence among men, which was stronger among older participants.

Most of the risk factors were associated with a similar proportion of CHD incidence among women and men as measured by PAR% (Table 2). The exceptions to this were high cholesterol, which accounted for a higher proportion of CHD incidence among men, and having less than 9 years of education, which accounted for a higher proportion of CHD incidence among women.

Reported by: Div of Analysis, Office of Analysis and Epidemiology, National Center for Health Statistics, CDC.

Editorial Note: Since the mid-1960s, national death rates for CHD have been decreasing for both sexes (4). However, the proportional decrease has been greater among men than women, even though the decline began first among women. During that time, women in other developed countries (e.g., Finland and Sweden) have had larger proportional reductions in CHD mortality than men, even though in these countries,

FIGURE 1. Coronary heart disease incidence rate,* by sex and age group — Epidemiologic Follow-up Study of the First National Health and Nutrition Examination Survey, 1982–84, 1986, and 1987[†]



*Per 10,000 person-years.

[†]Because of the small number of persons of other races in the sample, this includes only the 12,402 white participants.

Coronary Heart Disease — Continued

as in the United States, men aged 40–69 years have been at least 2.5 times more likely to die from CHD than women (5). Thus, better understanding of risk factors may assist in reducing the incidence of CHD among women in the United States.

The rates of CHD incidence measured in this study may differ somewhat from the true incidence rates in the United States. In particular, the rates may be higher because of oversampling of persons of lower socioeconomic status during NHANES I, or they may be lower because of incomplete ascertainment of hospital stays or because persons diagnosed with but not hospitalized for CHD were not included (e.g., silent myocardial infarctions, which tend to be more prevalent among women [6], may not be identifiable from hospital records). Nonetheless, this database provides estimates of nationally representative CHD morbidity rates that are unavailable elsewhere.

Most women with CHD in the NHANES I cohort were diagnosed with a chronic form of CHD when they were hospitalized or when CHD was identified as the cause of death; some form of acute CHD was more likely to be diagnosed in men. Potential explanations for this difference include differential diagnosis of CHD by physicians or

TABLE 1. Relative risk for coronary heart disease, by sex, comparing the presence of each factor to its absence and controlling for all others — Epidemiologic Follow-up Study of the First National Health and Nutrition Examination Survey, 1982–84, 1986, and 1987*

Risk factor	Men		Women	
	RR [†]	(95% CI [‡])	RR	(95% CI)
Education[§]				
≤8th grade	1.3	(1.1–1.6)	1.6	(1.3–2.0)
9–12th grade	1.1	(0.9–1.3)	1.1	(0.9–1.4)
Hypertension	1.5	(1.3–1.7)	1.5	(1.3–1.8)
High cholesterol	1.4	(1.2–1.6)	1.1	(0.9–1.2)
Diabetes	1.9	(1.5–2.5)	2.4	(1.9–3.0)
Overweight	1.3	(1.1–1.5)	1.4	(1.2–1.6)
Cigarette smoking	1.6	(1.4–1.8)	1.8	(1.5–2.1)

*Because of the small number of persons of other races in the sample, this includes only the 12,402 white participants.

†Relative risk.

‡Confidence interval.

§Compared with persons having completed at least some college education.

TABLE 2. Population-attributable risk percentages for selected risk factors of coronary heart disease, by sex — Epidemiologic Follow-up Study of the First National Health and Nutrition Examination Survey, 1982–84, 1986, and 1987*

Risk factor	Men	Women
<9th-grade education	7%	11%
Hypertension	13%	13%
High cholesterol	10%	2%
Diabetes	4%	5%
Overweight	6%	9%
Cigarette smoking	20%	19%

*Because of the small number of persons of other races in the sample, this includes only the 12,402 white participants.

Coronary Heart Disease — Continued

differential treatment whereby physicians do not treat CHD as aggressively in women, allowing it to progress to advanced stages that are less successfully treated (7). Although data regarding severity of disease were not obtained in this study, the findings suggest the need to further assess possible differentials in recorded diagnoses.

In this analysis, age was the strongest risk factor and the factor differing the most by sex. Although for persons aged 25–64 years, the ratio of male-to-female CHD incidence was 2:1, the risk for CHD in older women was approximately the same as in older men. This effect of age is only partially explained by cessation of estrogen production after menopause (2,8), and additional causes of the effect of age must be identified and studied.

In this analysis, risk factors often targeted in health education programs (i.e., hypertension, high cholesterol, cigarette smoking, and overweight) all appear related to incidence of CHD in both sexes. Cigarette smoking and hypertension are especially important modifiable factors that increase the risk for CHD. Although a weak association between CHD and cholesterol was found among women, this may reflect the need to study component elements of cholesterol (e.g., low-density lipoprotein). Finally, the substantial impact of low education levels on the incidence of CHD among women and older men suggests that low socioeconomic status has an additional influence on CHD not mediated through other risk factors.

References

1. NCHS. Health, United States, 1990. Hyattsville, Maryland: US Department of Health and Human Services, Public Health Service, CDC, 1991; DHHS publication no. (PHS)91-1232.
2. Eaker ED, Packard B, Thom TJ. Epidemiology and risk factors for coronary heart disease in women. *Cardiovasc Clin* 1989;19:129–45.
3. NCHS. Plan and operation of the NHANES I Epidemiologic Followup Study, 1982–84. Hyattsville, Maryland: US Department of Health and Human Services, Public Health Service, CDC, 1987. (Vital and health statistics; series 1, no. 22).
4. Higgins M, Thom T. Trends in CHD in the United States. *Int J Epidemiol* 1989;18(suppl 1):S58–66.
5. Beaglehole R. International trends in coronary heart disease mortality, morbidity, and risk factors. *Epidemiol Rev* 1990;12:1–15.
6. Lerner DJ, Kannel WB. Patterns of coronary heart disease morbidity and mortality in the sexes: a 26-year follow-up of the Framingham population. *Am Heart J* 1986;111:383–90.
7. Khan SS, Nessim S, Gray R, Czer LS, Chaux A, Matloff J. Increased mortality of women in coronary artery bypass surgery: evidence for referral bias. *Ann Intern Med* 1990;112:561–7.
8. Barrett-Connor E, Bush TL. Estrogen and coronary heart disease in women. *JAMA* 1991;265:1861–7.

Effectiveness in Disease and Injury Prevention

**Estimated National Spending on Prevention —
United States, 1988**

Despite the overall health improvements achieved through preventive interventions, the United States continues to be burdened by preventable illness, injury, and disability (1). For example, annual health-care expenditures for cardiovascular disease alone exceed \$135 billion and injury and disability, \$170 billion (1). This report summarizes the findings of a study to estimate national funding for health promotion and disease prevention in the United States during 1988 (2).

Prevention — Continued

The Health Care Financing Administration (HCFA) annually estimates the total national expenditures on health in the national health accounts (NHA)* (3). The NHA is the benchmark for determining the amount and growth of spending on health and for characterizing what services and products are purchased and the sources of payment. However, NHA information on prevention expenditures is limited because of cost definitions, demarcations between categories, and the availability and accuracy of secondary data sources. Further, NHA does not include all spending on prevention. For example, certain prevention programs such as environmental health, sewer and water systems, and social programs (e.g., the Supplemental Food Program for Women, Infants, and Children) that have a health component are not included in NHA. Therefore, a comprehensive estimate of spending on prevention in the United States requires additional assumptions and additional data sources.

For this study (3), prevention was defined as activities that reduce the incidence, prevalence, and burden of disease and injury and enhance health by improving physical, social, and mental well-being. The three categories of prevention are health promotion, health protection, and preventive health services (1). Health promotion activities influence personal health behaviors; health protection changes the social and physical environment to restrict personal exposures; and preventive health services offer counseling, screening, and vaccination in clinical settings.

To document all such sources of prevention funding, data were examined by funding sources[†] (2,4), including federal, state, and local government programs; voluntary health associations; corporations and foundations; worksite programs; and personal prevention services.

Based on this review and analysis, CDC estimates that in 1988 the total spending on prevention in the United States was \$32.8 billion (0.7% of the gross national product [GNP]). Approximately half (\$15.7 billion [48%]) of this was spent by the federal government; personal spending and insurance spent nearly one third (\$10.0 billion [31%]); state governments, \$3.7 billion (11%); and local governments, \$2.4 billion (7%). The remaining \$1.0 billion (3%) was spent by voluntary health associations, foundations, and corporations through worksite health promotion programs.

Of the total prevention-related spending in 1988, \$11.6 billion (35%) was spent on preventive health services, \$9.8 billion (30%) on health protection, and \$7.8 billion (24%) on health promotion. The remaining \$3.7 billion (11%) of prevention spending could not be categorized, often because the spending overlapped multiple categories.

*The NHA includes health services and supplies; the type of product consumed or the type of facility providing the service determines whether it is included in the NHA. The NHA is categorized into personal health care, government public health activities, program administration, and research and construction. The estimates for these categories are based on secondary data sources that include the federal budget, Bureau of the Census survey of new construction, Consumer Expenditure Survey, nursing home surveys, trade associations, and the Bureau of the Census. The NHA excludes certain prevention programs (e.g., environmental health, sewer and water systems, and some social programs that have a health component). The national health expenditures represent the combined value of these goods and services during a year.

[†]The most recent year for which data from state health agencies were available that included estimates of the proportion devoted to prevention was 1984, which were applied to total expenditures in 1988.

Prevention — Continued

To estimate the proportion spent on prevention within the NHA categories, the study identified prevention-related goods and services using the same categories and sources of data as the NHA. In 1988, national health expenditures accounted for \$539.9 billion (11% of the GNP) (4); of the total national health expenditures within all categories included in the NHA, \$18.4 billion (3%) was spent on prevention.

Reported by: R Brown, MS, J Corea, B Luce, PhD, Battelle, Medical Technology and Policy Research Center, Arlington, Virginia; A Elixhauser, PhD, Agency for Health Care Policy and Research; S Sheingold, PhD, Health Care Financing Administration, Office of Program Planning and Evaluation, Office of the Director, CDC.

Editorial Note: This study suggests that approximately 3% of health-care expenditures in the United States are allocated to prevention. The accuracy of this estimate, however, is affected by the accuracy of the original data sources and the completeness of data collection. Because of the accountability required for government spending, only spending from private and insurance sources—which constitute one third of spending on prevention—are likely to be substantially underestimated. However, even if spending from private and insurance funds had been underestimated by 50%, total spending on prevention would not exceed 5% of expenditures.

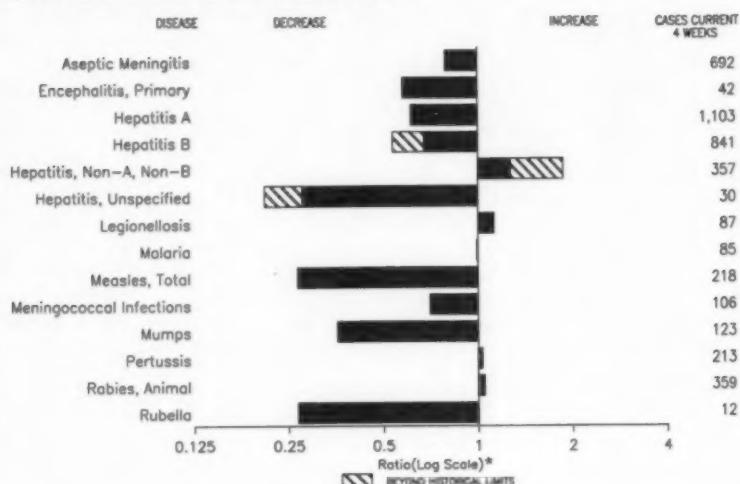
Increasing concern about the influence of estimates of health-care effectiveness on policy decisions may require periodic reviews of health information systems. To more accurately characterize the cost and the value of preventive services in the United States, CDC has initiated a multifaceted assessment of the effectiveness of selected preventive measures and strategies (5,6). In addition, the Medical Treatment Effectiveness Program of the Agency for Health Care Policy and Research has instituted efforts to improve the effectiveness and appropriateness of clinical practice, including preventive services (7).

More precise information on the benefits of prevention services should assist legislators, health-care organizations, public health agencies, and other decision makers in developing strategies to address fundamental concerns, such as access to health care, increasing health-care costs, and the changing health-care needs of an aging population (5,6). Strategies to increase and optimize the application of national prevention resources should be designed to 1) increase disease and injury prevention awareness and to promote healthy behaviors; 2) change the social and physical environment to eliminate exposures that can cause disease and injury; and 3) provide counseling and screening in clinical settings.

References

1. Public Health Service. Healthy people 2000: national health promotion and disease prevention objectives—full report, with commentary. Washington, DC: US Department of Health and Human Services, Public Health Service, 1991; DHHS publication no. (PHS)91-50212.
2. Brown R, Elixhauser A, Corea J, Luce B, Sheingold S. National expenditures for health promotion and disease prevention activities in the United States. Washington, DC: Battelle; Medical Technology Assessment and Policy Research Center, 1991; publication no. BHARC-013/91-019.
3. Office of National Cost Estimates. Revision to the national health accounts and methodology. *Health Care Financing Review* 1990;11:42-54.
4. Office of National Cost Estimates. National health expenditures, 1988. *Health Care Financing Review* 1990;11:1-41.
5. CDC. Public health focus: effectiveness of disease and injury prevention. *MMWR* 1992;41: 265-6.
6. CDC. A framework for assessing the effectiveness of disease and injury prevention. *MMWR* 1992;41(no. RR-3).
7. Agency for Health Care Policy and Research. Medical treatment effectiveness research. In: AHCPR program note. Rockville, Maryland: US Department of Health and Human Services, Public Health Service, March 1990.

FIGURE I. Notifiable disease reports, comparison of 4-week totals ending July 18, 1992, with historical data — United States



*Ratio of current 4-week total to the mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

TABLE I. Summary — cases of specified notifiable diseases, United States, cumulative, week ending July 18, 1992 (29th Week)

	Cum. 1992		Cum. 1992
AIDS*	23,872	Measles: imported	88
Anthrax	-	Measles: indigenous	1,259
Botulism: Foodborne	8	Plague	2
Infant	31	Poliomyelitis, Paralytic [†]	-
Other	1	Poliomyelitis, Nonparalytic	50
Brucellosis	38	Rabies, human	-
Cholera	42	Syphilis, primary & secondary	18,566
Congenital rubella syndrome	7	Syphilis, congenital, age < 1 year [‡]	697
Diphtheria	3	Tetanus	9
Encephalitis, post-infectious	85	Toxic shock syndrome	142
Gonorrhea	263,601	Trichinosis	17
<i>Haemophilus influenzae</i> (invasive disease)	841	Tuberculosis	11,618
Hansen Disease	96	Tularemia	71
Leptospirosis	17	Typhoid fever	179
Lyme Disease	2,967	Typhus fever, tickborne (RMSF)	172

*Updated monthly; last update July 4, 1992.

[†]Two cases of suspected poliomyelitis have been reported in 1992; six of the nine suspected cases with onset in 1991 were confirmed and 5 of the 8 suspected cases with onset in 1990 were confirmed, and all were vaccine associated.

[‡]Updates for first quarter 1992.

TABLE II. Cases of selected notifiable diseases, United States, weeks ending July 18, 1992, and July 20, 1991 (29th Week)

Reporting Area	AIDS*	Aseptic Meningitis		Encephalitis		Gonorrhea		Hepatitis (Viral), by type				Legionellosis	Lyme Disease		
		Prim.	Post-infectious	Prim.	Post-infectious	Cum. 1992	Cum. 1991	Cum. 1992	Cum. 1992	Cum. 1992	Cum. 1992				
UNITED STATES	23,872	3,312	289	85	263,601	321,555	10,765	8,530	4,051	360	694	2,997			
NEW ENGLAND	755	151	17	-	5,559	8,025	320	319	39	15	34	4	600		
Maine	27	14	1	-	41	91	23	17	5	-	1	1	4		
N.H.	25	7	2	-	12	154	23	24	12	1	3	15			
Vt.	11	7	2	-	14	27	5	8	5	-	2	2	2		
Mass.	431	62	9	-	2,058	3,431	162	240	14	14	18	52			
R.I.	61	81	3	-	416	634	74	17	3	-	10	70			
Conn.	200	-	-	-	3,018	3,686	33	13	-	-	-	457			
MID. ATLANTIC	6,001	340	15	7	27,225	38,940	811	1,122	200	13	203	1,796			
Upstate N.Y.	736	158	-	-	5,406	6,652	199	269	126	6	83	1,213			
N.Y. City	3,309	70	4	1	8,844	15,199	305	193	3	-	3	4			
N.J.	1,214	-	-	-	3,884	6,407	122	288	52	-	24	193			
Pa.	742	112	11	6	9,089	10,682	185	372	19	7	93	386			
E.N. CENTRAL	2,192	463	75	26	49,411	56,396	1,554	1,292	710	22	157	62			
Ohio	414	131	23	2	15,144	16,033	239	129	58	4	73	29			
Ind.	222	68	8	11	4,618	5,770	459	453	329	6	17	19			
Ill.	979	97	24	6	16,082	17,064	280	126	37	4	10	4			
Mich.	457	160	19	7	11,576	13,371	80	343	244	8	38	10			
Wis.	120	7	1	-	1,991	4,158	497	241	42	-	19	-			
W.N. CENTRAL	675	160	17	5	11,320	15,699	1,251	351	147	18	42	111			
Minn.	120	15	2	-	1,566	1,573	380	44	12	2	2	37			
Iowa	50	26	-	3	857	1,111	20	20	4	2	13	9			
Mo.	347	59	8	-	6,070	9,655	414	231	113	13	14	44			
N. Dak.	1	1	1	-	39	34	68	1	3	1	1	1			
S. Dak.	6	6	-	1	95	183	179	4	-	-	-	-			
Nebr.	29	10	2	1	8	1,104	88	13	5	-	11	10			
Kans.	122	43	4	-	2,685	2,039	92	38	10	-	1	10			
S. ATLANTIC	5,678	640	59	35	84,453	97,555	677	1,446	570	56	103	203			
Del.	64	21	5	-	963	1,374	24	139	115	1	16	83			
Md.	669	85	10	-	8,108	10,098	129	221	21	5	18	27			
D.C.	417	13	1	-	3,773	5,473	11	45	233	-	7	-			
Va.	322	105	19	9	9,793	9,360	61	105	23	20	10	52			
W. Va.	29	7	3	-	497	648	4	32	1	12	-	3			
N.C.	370	72	16	-	13,929	19,400	58	237	55	-	17	22			
S.C.	166	7	-	-	6,107	7,499	14	30	-	-	16	-			
Ga.	759	79	2	-	26,020	23,860	87	169	55	-	5	2			
Fla.	2,882	251	2	26	15,263	19,843	289	468	67	18	14	14			
E.S. CENTRAL	739	211	10	-	25,681	30,663	168	730	1,229	2	33	41			
Ky.	105	66	7	-	2,667	3,240	46	44	2	-	16	14			
Tenn.	227	48	1	-	7,966	11,046	74	608	1,216	-	11	22			
Ala.	272	56	1	-	8,723	8,667	27	75	10	1	6	5			
Miss.	135	41	1	-	6,326	7,710	21	3	1	1	-	-			
W.S. CENTRAL	2,174	416	29	4	29,995	37,144	1,018	1,072	71	83	11	67			
Ark.	112	5	7	-	4,357	4,217	52	46	6	3	-	10			
La.	390	33	2	1	8,404	8,622	92	86	29	2	1	2			
Okl.	147	-	2	2	2,941	3,676	115	103	21	3	5	16			
Tex.	1,525	378	18	1	14,293	20,626	759	837	15	75	5	39			
MOUNTAIN	686	118	13	4	6,098	6,869	1,550	390	158	33	56	4			
Mont.	12	2	1	1	60	62	50	22	29	-	9	-			
Idaho	15	19	-	-	63	84	34	52	3	-	4	2			
Wyo.	2	-	1	-	20	54	3	2	10	-	1	1			
Colo.	236	35	6	1	1,832	1,992	440	61	52	17	10	-			
N. Mex.	58	8	3	1	506	636	153	105	15	7	2	-			
Ariz.	203	35	1	-	2,340	2,567	643	78	18	4	17	-			
Utah	54	1	1	1	158	181	178	9	19	5	2	1			
Nev.	106	18	-	-	1,798	1,293	49	60	12	-	11	-			
PACIFIC	4,972	813	54	4	23,858	28,264	3,416	1,808	927	118	55	113			
Wash.	255	-	1	-	2,091	2,521	380	184	73	6	8	3			
Oreg.	146	-	-	-	897	1,150	196	165	42	7	-	-			
Calif.	4,484	758	50	3	20,210	23,730	2,674	1,439	653	97	46	110			
Alaska	8	5	3	-	400	427	30	8	2	1	-	-			
Hawaii	79	50	-	1	261	436	138	12	157	7	1	-	-		
Guam	-	2	-	-	45	-	5	1	-	6	-	1			
P.R.	876	94	1	-	98	362	20	248	75	16	1	-	-		
V.I.	2	-	-	-	60	258	2	5	-	-	-	-			
Amer. Samoa	-	-	-	-	24	27	1	1	-	-	-	-			
C.N.M.I.	-	-	-	-	41	37	-	-	-	-	-	-			

N: Not notifiable

U: Unavailable

C.N.M.I.: Commonwealth of the Northern Mariana Islands

*Updated monthly; last update July 4, 1992.

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending July 18, 1992, and July 20, 1991 (29th Week)

Reporting Area	Malaria	Measles (Rubella)			Meningococcal infections	Mumps		Pertussis			Rubella				
		Indigenous		Imported*		Cum. 1992	Cum. 1992	1992	Cum. 1992	Cum. 1991	1992	Cum. 1992	Cum. 1991		
		Cum. 1992	1992	Cum. 1992	Cum. 1991	Cum. 1992	Cum. 1992	1992	Cum. 1991	1992	Cum. 1992	Cum. 1991	Cum. 1991		
UNITED STATES	456	68	1,259	2	88	7,850	1,346	24	1,627	80	913	1,252	2	117	1,039
NEW ENGLAND	24	-	45	-	7	57	84	-	10	-	79	193	-	6	4
Maine	-	-	-	-	-	-	7	-	-	-	3	44	-	1	-
N.H.	3	-	15	-	-	-	5	-	2	-	24	17	-	-	1
Vt.	-	-	-	-	-	5	3	-	-	1	3	-	-	-	1
Mass.	11	-	11	-	3	27	35	-	2	-	36	111	-	-	2
R.I.	4	-	19	-	-	2	1	-	-	-	-	-	-	4	-
Conn.	6	-	-	-	4	23	33	-	6	-	15	18	-	1	1
MID. ATLANTIC	119	1	170	-	12	4,387	147	2	111	6	84	128	-	15	561
Upstate N.Y.	20	1	79	-	3	379	74	-	46	-	25	73	-	11	536
N.Y. City	63	-	42	-	8	1,560	12	-	18	-	11	16	-	-	2
N.J.	20	-	44	-	1	1,014	18	-	11	-	14	9	-	3	2
Pa.	16	-	5	-	-	1,444	43	2	36	6	34	30	-	1	21
E.N. CENTRAL	29	-	25	-	10	77	206	-	212	3	67	246	-	7	173
Ohio	4	-	2	-	3	3	55	-	82	2	31	68	-	-	147
Ind.	8	-	20	-	-	1	27	-	7	-	14	47	-	-	2
Ill.	8	-	1	-	4	25	57	-	59	-	6	50	-	7	4
Mich.	8	-	2	-	2	39	51	-	56	1	5	23	-	-	19
Wis.	1	-	-	-	1	8	16	-	8	-	11	58	-	-	1
W.N. CENTRAL	25	-	6	-	5	39	61	3	59	4	76	82	-	4	16
Minn.	13	-	6	-	4	10	7	1	10	3	27	28	-	-	6
Iowa	2	-	-	-	1	15	7	2	11	-	3	9	-	-	5
Mo.	7	-	-	-	-	-	18	-	21	1	26	29	-	-	5
N. Dak.	-	-	-	-	-	-	1	-	2	-	8	2	-	-	-
S. Dak.	-	-	-	-	-	-	1	-	-	-	5	3	-	-	-
Nebr.	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kans.	2	-	U	-	U	-	1	13	U	4	U	3	5	U	-
S. ATLANTIC	91	2	114	1	11	424	247	11	620	5	74	108	-	13	6
Del.	4	-	3	-	-	21	2	-	4	-	1	-	-	-	-
Md.	28	-	9	-	7	165	26	2	59	1	16	16	-	5	1
D.C.	6	-	-	-	-	-	1	-	5	-	-	-	-	-	-
Va.	20	2	10	11	4	28	38	5	38	2	6	16	-	1	1
W. Va.	-	-	-	-	-	-	14	-	22	-	2	7	-	-	-
N.C.	7	-	25	-	-	35	51	-	126	-	13	18	-	-	1
S.C.	-	-	29	-	-	12	18	-	46	-	9	9	-	-	-
Ga.	3	-	-	-	-	14	26	-	58	-	8	22	-	-	-
Fla.	23	-	38	-	-	149	61	4	264	2	19	20	-	5	3
E.S. CENTRAL	12	-	441	-	18	2	90	-	40	1	17	39	-	1	100
Ky.	1	-	439	-	1	1	27	-	-	-	-	-	-	-	-
Tenn.	7	-	-	-	-	1	27	-	13	-	5	16	-	1	100
Ala.	4	-	-	-	-	-	27	-	7	1	11	22	-	-	-
Miss.	-	-	2	-	17	-	9	-	20	-	1	1	-	-	-
W.S. CENTRAL	17	63	365	-	-	127	100	3	285	4	34	33	-	-	5
Ark.	-	-	-	-	-	5	8	-	6	-	9	3	-	-	1
La.	1	-	-	-	-	23	-	15	1	1	9	-	-	-	-
Okla.	4	-	11	-	-	13	-	15	3	24	15	-	-	-	-
Tex.	12	63	364	-	-	122	56	3	249	-	6	-	-	-	4
MOUNTAIN	11	1	4	1	7	941	68	1	93	30	182	132	-	5	4
Mont.	-	-	-	-	-	-	12	-	2	-	1	1	-	-	-
Idaho	-	-	-	-	-	380	8	-	3	4	21	20	-	1	-
Wyo.	-	-	1	-	-	-	2	-	-	-	3	-	-	-	-
Colo.	5	1	3	11	7	5	12	-	13	-	24	67	-	-	1
N. Mex.	1	-	-	-	-	98	6	N	N	3	36	13	-	-	-
Ariz.	4	-	-	-	-	312	15	-	51	14	75	8	-	-	1
Utah	-	-	-	-	-	129	4	1	17	9	24	18	-	1	-
Nev.	1	-	-	-	-	17	9	-	7	1	2	1	-	-	2
PACIFIC	128	1	89	-	18	1,796	343	4	197	27	300	291	2	66	170
Wash.	7	-	-	-	10	4	46	-	8	14	83	71	-	6	-
Oreg.	10	-	4	-	1	62	45	N	N	-	14	37	-	2	2
Calif.	104	1	47	-	-	1,712	241	4	177	13	184	134	2	38	161
Alaska	1	-	8	-	1	1	6	-	1	-	3	12	-	-	-
Hawaii	6	-	30	-	6	17	5	-	11	-	16	37	-	20	7
Guam	1	U	10	U	-	-	-	U	7	U	-	-	U	1	-
P.R.	-	-	253	-	-	84	3	-	1	-	8	27	-	-	1
V.I.	-	-	-	-	-	2	-	1	17	-	-	-	-	-	-
Amer. Samoa	-	-	-	-	-	24	-	-	-	-	6	-	-	-	-
C.N.M.I.	-	U	-	U	-	-	-	U	U	-	U	1	-	U	-

*For measles only, imported cases includes both out-of-state and international importations.

N: Not notifiable U: Unavailable ¹International ²Out-of-state

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending July 18, 1992, and July 20, 1991 (29th Week)

Reporting Area	Syphilis (Primary & Secondary)		Toxic- shock Syndrome	Tuberculosis		Tula- remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1992	Cum. 1991		Cum. 1992	Cum. 1991				
UNITED STATES	18,566	23,588	142	11,618	12,220	71	179	172	4,322
NEW ENGLAND	338	613	10	190	330	-	18	6	386
Maine	2	-	-	14	27	-	-	-	-
N.H.	-	12	6	1	5	-	1	-	1
Vt.	1	1	-	3	4	-	-	-	17
Mass.	176	268	3	74	161	-	11	4	4
R.I.	20	33	1	24	33	-	-	1	-
Conn.	139	279	-	74	150	-	6	1	364
MID. ATLANTIC	2,722	4,226	18	2,710	2,870	-	48	13	1,255
Upstate N.Y.	186	375	8	174	384	-	6	3	673
N.Y. City	1,432	2,075	-	1,687	1,733	-	20	3	-
N.J.	365	735	-	502	471	-	15	4	401
Pa.	739	1,041	10	347	382	-	7	3	181
E.N. CENTRAL	2,644	2,653	40	1,188	1,221	1	20	16	76
Ohio	404	363	12	183	178	-	3	11	6
Ill.	158	83	9	96	100	-	-	2	9
Ind.	1,213	1,242	5	591	640	1	15	-	12
Mich.	549	664	14	271	247	-	1	1	8
Wis.	320	301	-	47	56	-	1	2	41
W.N. CENTRAL	612	404	23	267	301	29	2	13	742
Minn.	44	44	5	69	58	-	1	-	107
Iowa	25	35	5	22	43	-	-	-	130
Mo.	460	279	3	120	127	21	1	11	7
N. Dak.	1	1	1	2	6	-	-	-	100
S. Dak.	-	1	-	15	23	6	-	1	75
Nebr.	1	9	3	13	11	1	-	-	8
Kans.	81	35	6	27	33	1	-	1	315
S. ATLANTIC	5,245	6,976	14	2,175	2,273	3	13	36	975
Del.	125	88	3	25	16	-	-	3	127
Md.	384	581	2	152	210	1	2	4	296
D.C.	245	429	-	72	114	-	1	1	11
Va.	394	536	1	154	199	2	-	2	167
W. Va.	7	18	1	46	40	-	1	3	23
N.C.	1,341	1,066	3	271	310	-	-	16	2
S.C.	699	864	1	234	234	-	1	2	75
Ge.	1,063	1,713	1	481	439	-	-	3	204
Fla.	987	1,681	2	740	711	-	8	2	70
E.S. CENTRAL	2,436	2,559	1	762	784	5	3	30	76
Ky.	82	47	-	209	185	1	-	3	42
Tenn.	677	873	1	160	203	4	-	25	-
Ala.	933	945	-	229	221	-	-	2	34
Miss.	744	694	-	164	175	-	3	-	-
W.S. CENTRAL	3,408	4,274	1	1,202	1,436	17	6	48	446
Ark.	477	386	-	103	121	9	-	8	19
La.	1,421	1,366	-	87	119	-	-	-	-
Okla.	152	105	-	82	102	8	-	41	223
Tex.	1,358	2,417	1	930	1,083	-	6	-	203
MOUNTAIN	211	328	10	310	339	15	2	5	90
Mont.	7	5	-	-	3	8	-	2	11
Idaho	1	3	1	12	4	-	1	1	-
Wyo.	1	4	-	-	3	2	-	-	23
Colo.	24	53	4	29	33	2	1	-	5
N. Mex.	24	19	1	47	45	3	-	1	5
Ariz.	107	212	2	135	181	-	-	-	43
Utah	6	5	2	46	30	-	-	1	1
Nev.	41	27	-	41	40	-	-	-	2
PACIFIC	950	1,555	25	2,814	2,867	1	67	4	277
Wash.	49	105	-	173	167	-	4	-	-
Oreg.	25	45	1	71	58	-	-	1	-
Calif.	867	1,397	24	2,412	2,289	1	60	3	265
Alaska	4	4	-	31	41	-	-	-	12
Hawaii	5	4	-	127	112	-	3	-	-
Guam	2	-	-	34	-	-	3	-	-
P.R.	176	264	-	135	109	-	1	-	31
V.I.	35	69	-	3	2	-	-	-	-
Amer. Samoa	-	-	-	-	2	-	1	-	-
C.N.M.I.	4	-	-	37	6	-	1	-	-

U: Unavailable

TABLE III. Deaths in 121 U.S. cities,* week ending July 18, 1992 (29th Week)

Reporting Area	All Causes, By Age (Years)						P&I [†] Total	Reporting Area	All Causes, By Age (Years)						P&I [†] Total
	All Ages	>65	45-64	25-44	1-24	<1			All Ages	>65	45-64	25-44	1-24	<1	
NEW ENGLAND	818	416	116	56	20	10	51	S. ATLANTIC	1,308	768	271	151	58	58	61
Boston, Mass.	175	116	34	17	3	5	19	Atlanta, Ga.	188	109	41	27	8	3	2
Bridgeport, Conn.	43	28	6	5	3	1	2	Baltimore, Md.	263	140	60	35	18	9	14
Cambridge, Mass.	25	15	8	2	-	-	3	Charlotte, N.C.	80	52	16	9	-	3	3
Fall River, Mass.	34	27	6	1	-	-	1	Jacksonville, Fla.	120	83	21	10	4	2	7
Hartford, Conn.	58	36	9	5	7	1	1	Miami, Fla.	87	37	31	15	3	1	1
Lynn, Mass.	19	15	3	1	-	-	1	Norfolk, Va.	61	39	7	9	2	4	3
New Bedford, Mass.	22	17	3	2	-	-	1	Richmond, Va.	79	49	15	8	7	-	6
New Haven, Conn.	60	37	10	9	3	1	4	Savannah, Ga.	46	33	2	7	4	-	5
Providence, R.I.	32	12	10	8	2	-	-	S. Peterburg, Fla.	53	41	8	3	1	-	3
Somerville, Mass.	6	5	1	-	-	-	-	Tampa, Fla.	145	94	32	9	7	2	15
Springfield, Mass.	46	31	11	4	-	-	5	Washington, D.C.	176	82	38	18	4	34	5
Waterbury, Conn.	31	24	6	-	1	-	2	Wilmington, Del.	10	9	-	-	-	-	-
Worcester, Mass.	51	40	6	2	1	2	9	E.S. CENTRAL	715	462	166	54	15	18	63
MID. ATLANTIC	2,750	1,688	596	339	70	57	97	Birmingham, Ala.	101	62	25	8	1	5	2
Albany, N.Y.	46	27	7	4	2	1	1	Chattanooga, Tenn.	35	18	13	3	1	-	3
Allentown, Pa.	30	23	6	1	-	-	1	Knoxville, Tenn.	74	49	14	8	3	-	5
Buffalo, N.Y.	100	68	25	2	2	3	3	Lexington, Ky.	68	46	16	4	1	1	11
Camden, N.J.	34	21	5	1	3	4	1	Memphis, Tenn.	197	129	40	18	2	8	25
Elizabeth, N.J.	22	12	6	4	-	-	-	Mobile, Ala.	70	54	10	3	1	2	5
Eric, Pa. [§]	44	31	11	1	1	-	1	Montgomery, Ala.	40	28	9	2	1	-	2
Jersey City, N.J.	50	29	10	9	2	-	1	Nashville, Tenn.	130	76	39	8	5	2	10
New York City, N.Y.	1,514	919	313	222	38	22	49	W.S. CENTRAL	1,408	874	264	157	60	53	73
Newark, N.J.	68	21	19	17	7	4	8	Austin, Tex.	54	37	7	4	2	4	4
Paterson, N.J.	33	13	10	2	1	7	1	Baton Rouge, La.	50	33	4	7	3	3	3
Philadelphia, Pa.	361	220	83	39	10	9	9	Corpus Christi, Tex.	36	24	4	6	-	-	-
Pittsburgh, Pa. [§]	90	55	22	11	1	1	5	El Paso, Tex.	65	39	17	4	1	4	4
Reading, Pa.	15	9	4	2	-	-	-	Ft. Worth, Tex.	119	78	16	15	6	4	7
Rochester, N.Y.	111	72	26	11	2	-	-	Houston, Tex.	364	194	79	51	19	21	26
Schenectady, N.Y.	26	18	5	3	-	-	-	Little Rock, Ark.	63	43	9	6	2	3	2
Scranton, Pa. [§]	22	17	4	-	-	-	-	New Orleans, La.	110	65	22	12	6	5	-
Syracuse, N.Y.	103	70	26	5	-	3	6	San Antonio, Tex.	142	99	29	9	3	2	7
Trenton, N.J.	37	26	7	2	-	2	4	Shreveport, La.	43	31	8	2	2	-	5
Utica, N.Y.	18	13	4	-	1	-	-	Tulsa, Okla.	142	94	30	12	4	2	5
Yonkers, N.Y.	26	19	4	3	-	-	2	MOUNTAIN	730	478	138	82	26	26	39
E.N. CENTRAL	2,053	1,247	391	215	137	63	98	Albuquerque, N.M.	68	50	11	6	1	-	3
Akron, Ohio	77	59	9	5	1	3	-	Colo. Springs, Colo.	40	24	6	5	2	3	1
Canton, Ohio	43	34	5	-	2	2	2	Denver, Colo.	117	75	16	13	5	8	2
Chicago, Ill.	422	148	74	93	95	12	13	Las Vegas, Nev.	103	58	29	9	4	3	5
Cincinnati, Ohio	138	97	24	10	2	5	18	Ogden, Utah	27	20	5	-	1	1	1
Cleveland, Ohio	117	77	23	11	2	4	1	Phoenix, Ariz.	145	98	26	9	5	7	16
Columbus, Ohio	156	89	42	16	3	6	5	Pueblo, Colo.	19	12	5	2	-	-	1
Dayton, Ohio	125	89	18	9	5	4	7	Salt Lake City, Utah	105	70	18	12	2	3	4
Detroit, Mich.	176	101	43	21	8	3	10	Tucson, Ariz.	106	71	22	6	6	1	6
Evansville, Ind.	47	34	11	2	-	-	1	PACIFIC	1,992	1,324	359	197	68	39	105
Fort Wayne, Ind.	54	41	11	2	-	-	4	Berkeley, Calif.	11	8	2	1	-	-	4
Gary, Ind.	9	6	2	-	1	-	2	Fresno, Calif.	99	62	19	4	7	7	7
Grand Rapids, Mich.	47	31	13	2	1	-	5	Glendale, Calif.	26	21	2	1	1	1	1
Indianapolis, Ind.	170	111	33	15	2	9	4	Honolulu, Hawaii	75	50	19	3	2	1	4
Madison, Wis.	57	37	11	7	2	-	4	Long Beach, Calif.	62	47	8	5	1	1	3
Milwaukee, Wis.	141	95	29	6	6	5	7	Los Angeles, Calif.	590	365	107	80	30	5	25
Peoria, Ill.	56	38	6	7	2	3	3	Portland, Oreg.	146	100	32	11	2	1	6
Rockford, Ill.	44	33	4	1	3	3	2	Sacramento, Calif.	152	96	30	12	7	7	8
South Bend, Ind.	30	21	7	2	-	-	1	San Diego, Calif.	177	125	27	16	3	5	16
Toledo, Ohio	90	68	13	4	1	4	10	San Francisco, Calif.	157	91	39	23	2	1	7
Youngstown, Ohio	54	38	13	2	1	-	4	San Jose, Calif.	182	127	34	14	2	5	11
W.N. CENTRAL	778	547	124	55	25	27	34	Santa Cruz, Calif.	34	30	3	1	-	-	4
Des Moines, Iowa	81	56	15	6	1	3	3	Seattle, Wash.	130	86	23	16	4	1	4
Duluth, Minn.	22	18	2	1	-	-	-	Spokane, Wash.	54	41	6	4	1	2	1
Kansas City, Kans.	24	13	7	2	1	1	-	Tacoma, Wash.	67	54	6	3	4	-	1
Kansas City, Mo.	110	83	18	6	1	2	2	TOTAL	12,352 [‡]	7,804	2,425	1,286	479	351	621
Lincoln, Neb.	28	18	6	2	2	-	1								
Minneapolis, Minn.	210	163	26	16	8	7	15								
Omaha, Neb.	72	47	18	1	2	4	3								
St. Louis, Mo.	124	84	16	10	5	9	7								
St. Paul, Minn.	66	46	12	4	3	1	-								
Wichita, Kans.	41	29	4	7	1	-	2								

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

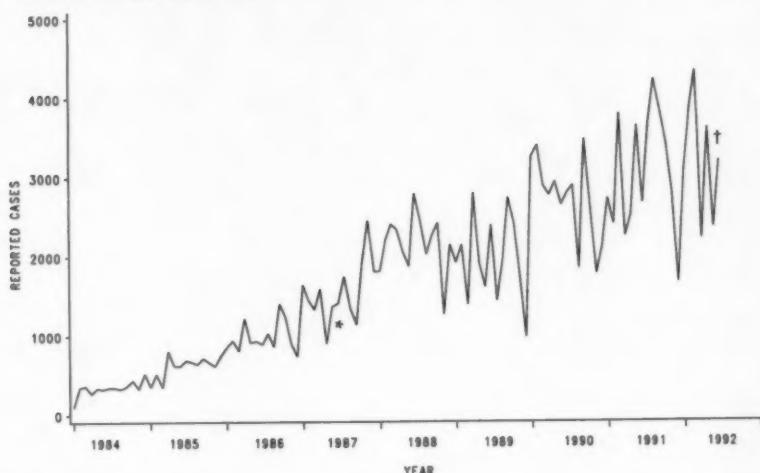
[†]Pneumonia and influenza.

[‡]Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

[§]Total includes unknown ages.

U: Unavailable

FIGURE II. Acquired immunodeficiency syndrome cases, by 4-week period of report — United States, 1984–1992



*Change in case definition.

†Change to reflect Notice to Readers Vol. 41, No. 18, p. 325.

FIGURE III. Tuberculosis cases, by 4-week period of report — United States, 1984–1992

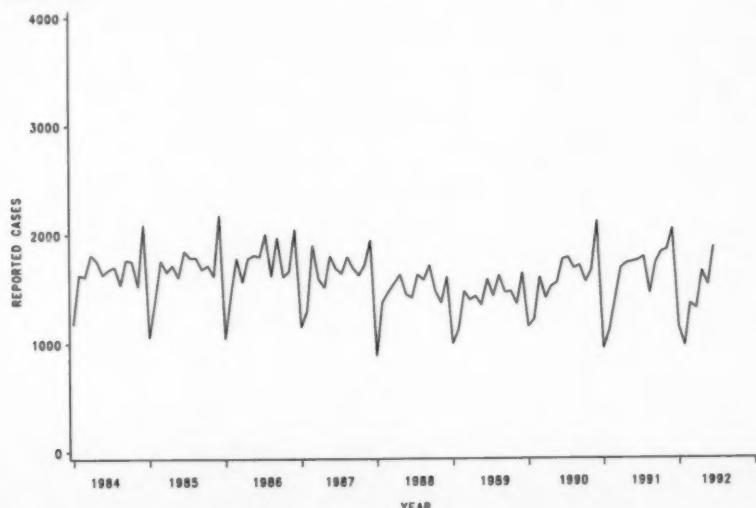


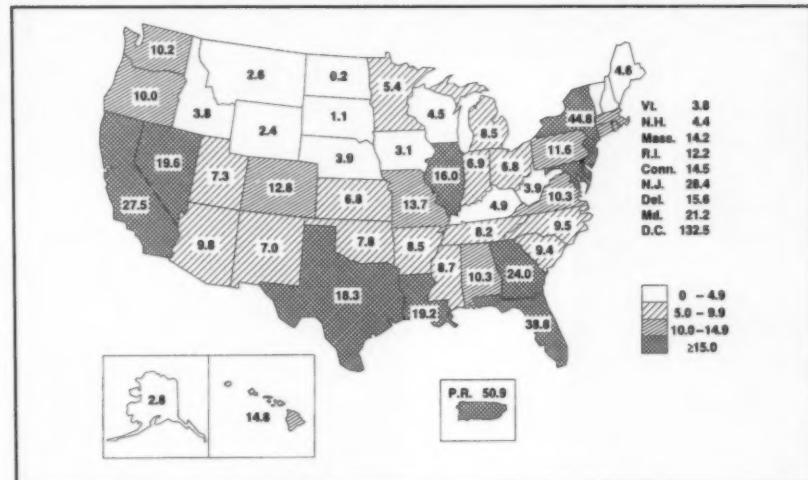
FIGURE IV. Gonorrhea cases, by 4-week period of report — United States, 1984–1992**FIGURE V. Syphilis cases, by 4-week period of report — United States, 1984–1992**

Notice to Readers**Changes in Table III: Deaths in 121 U.S. cities**

Beginning with this issue, reports from Lexington, Kentucky, will be included under the East South Central reporting area heading in Table III, Deaths in 121 U.S. cities. Reports from Louisville, Kentucky, are no longer available.

Quarterly AIDS Map

The following map provides information on the reported number of acquired immunodeficiency syndrome (AIDS) cases per 100,000 population by state of residence for July 1991 through June 1992. The map appears quarterly in *MMWR*. More detailed information on AIDS cases is provided in the quarterly *HIV/AIDS Surveillance Report*, single copies of which are available free from the CDC National AIDS Clearinghouse, P.O. Box 6003, Rockville, MD 20849-6003; telephone (800) 458-5231.

AIDS cases per 100,000 population — United States, July 1991–June 1992

The *Morbidity and Mortality Weekly Report (MMWR)* Series is prepared by the Centers for Disease Control and is available on a paid subscription basis from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402; telephone (202) 783-3238.

The data in the weekly *MMWR* are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday. Inquiries about the *MMWR* Series, including material to be considered for publication, should be directed to: Editor, *MMWR* Series, Mailstop C-08, Centers for Disease Control, Atlanta, GA 30333; telephone (404) 332-4555.

Director, Centers for Disease Control
William L. Roper, M.D., M.P.H.
Deputy Director, Centers for Disease Control
Walter R. Dowdle, Ph.D.
Director, Epidemiology Program Office
Stephen B. Thacker, M.D., M.Sc.

Editor, *MMWR* Series
Richard A. Goodman, M.D., M.P.H.
Managing Editor, *MMWR* (weekly)
Karen L. Foster, M.A.
Writers-Editors, *MMWR* (weekly)
David C. Johnson
Barbara J. Reynolds, M.A.
Ceran R. Wilbanks
Editorial Assistant, *MMWR* (weekly)
Darlene D. Rumph

★U.S. Government Printing Office: 1992-631-123/67018 Region IV

DEPARTMENT OF
HEALTH AND HUMAN SERVICES
Public Health Service
Centers for Disease Control
Atlanta, Georgia 30333

Official Business
Penalty for Private Use \$300

FIRST-CLASS MAIL
POSTAGE & FEES PAID
PHS/CDC
Permit No. G-284

A 48106SER 06 8639
SERIALS ACQUISITION DEPT
UNIVERSITY MICROFILMS
300 NORTH ZEEB ROAD
ANN ARBOR, MI 48106

N

